KOBE REPORT (draft)

THEMATIC PANEL 4

"REDUCING THE UNDERLYING RISK FACTORS"

Table of contents

1. summary of the panel

(The following summary is based on an abridged and modified version of the Thematic Discussion Paper for Cluster 4)

1.1 Nature of themes being addressed

There are a number of causal factors of disaster risk, arising from and associated with urban and rural development. These include land management, integrated resources management, industrial and economic development, health risks, and building and construction aspects. Social issues relevant at the community level, as well as gender issues, also play a role in understanding and reducing risk.

The heightened levels of disaster risk that humankind currently faces is a result of a number of causes, including exploitation of natural resources and alteration of the natural environment. This is compounded by a lack of understanding of the forces and processes that cause these risks. This gap was strongly evident within the thematic session, where it was apparent that contributors were far more at ease in suggesting ways forward rather than identifying the root causes of vulnerability. This focus may reflect a positive and healthy preoccupation to define practical and proven solutions or it may indicate a negative desire to sidestep the complexity and political sensitivity in diagnosing, or describing the nature of causal patterns of vulnerability as the root causes of disasters.

While the human dimensions of disasters and the risks that they pose received much attention, there was also a concern, (accentuated by the environmental aspects of the Indian ocean Tsunami) to take a closer look at the environmental aspects of disasters, both as a source of disasters (deforestation, natural resource exploitation etc.), as well as a casualty of the disaster (destruction of coral reefs and fishing ponds from floating debris, proper disposal of waste from disasters). This raises the criticality of managing and maintaining environmental systems to reduce the impacts of disasters.

A number of key factors that compound the risk were identified: (a) development processes and the risk that they pose – for example, natural resource exploitation, urban development, environmental degradation, caused by a number of factors, such as soil erosion and deforestation; (b) structures exposed to disaster risk – for example, public infrastructure, residential housing, critical facilities such as hospitals, heritage assets; (c) institutional and financial framework and social setting – for example, building codes, financing and insurance for disaster mitigation, community actions for prevention, poverty and livelihood etc. and (d) mechanisms to deal with risk, within the larger perspective of sustainable development.

While some natural hazards such as earthquakes and volcanoes are not triggered by human action, hazards such as flooding, landslides and wildfires can be and landslides are worsened by human activities. Hence, impacts of disasters are exacerbated not only due to the intrinsic hazards of the situation or location, but also because populations are vulnerable to the effects of the hazard. Risk management practices should pay attention to both the hazard itself, and the populations vulnerable to these hazards.

1.2 Linkages with other themes

The discussions were clustered around five themes, namely, (1) Governance: institutional and policy frameworks for risk reduction, (2) Risk identification, assessment, monitoring and early warning, (3) Knowledge management and education: building a culture of resilient communities, (4) Reducing the underlying risk factors, and (5) Preparedness for effective response. However, not all the themes secured the same level of scrutiny. Participants were particularly interested in the areas of Governance, Education, and Risk Reduction.

Of particular relevance to this WCDR Cluster was the role of different stakeholder groups in reducing vulnerabilities and risks. While risks managed by national and local governments are well understood and mapped out, the risks that are managed by communities and businesses are often neglected.

Given that the central factor in underlying risk is probably the presence of humans and their assets in hazardous areas, localized community-based disaster management is a critical aspect of risk reduction. Risk reduction measures are therefore most successful when they involve the direct participation of the communities most likely to be exposed to hazards. There is adequate experience to show that the involvement of local residents in protecting their own resources can work – if sufficient attention and investment are devoted to the subjects. Disaster reduction is most effective at the community level where specific local needs can be met.

1.3 Areas for focus in the future

In building governance, education and technology systems that can facilitate risk reduction associated with disasters (whether human-made or natural), attention will have to be paid on the following areas:

- Reducing vulnerabilities and hazards: One of the key focal areas for the future is the need to identify the vulnerability of communities and regions to hazards and risks. This will form the basis for reducing the risk factors and will help build a framework of risk factors that is accessible to, and can be used by, a range of stakeholders working at different levels of governance, such as planners, engineers, managers, and other decision-makers.

- Development of management tools and interventions: A logical complement to risk reduction is the development and identification of policy measures and management tools that can help reduce risks from natural and man-made disasters. These will form a key link between an understanding of the pre-disaster vulnerability and risk management activities, and post-disaster relief and rehabilitation. Management tools focusing on mitigation and remediation will also have to be developed.

- Promotion of financial risk-sharing mechanisms, particularly insurance and reinsurance, public and private compensation-schemes to victims, and dialogue with industry to focus on vulnerable populations and communities. Establishment of national and regional insurance funds with international partnership should also be encouraged.

- Building of capacities and partnerships: Human capacity to comprehend the implications of disaster preparedness, and take action, will be the ultimate deciding factor in reducing the destructive impacts of disasters. These capacities will have to be built at all levels of governance, taking into consideration the subsidiarity of decision-making processes, and the inherent capacities of the responsible stakeholders. This can be operationalized through public-private partnerships in pre-disaster activities such as risk assessments and early warning systems. Attention should be placed on partnerships emerging from WCDR, for example, the proposal by the Government of Japan to establish an international platform for disaster recovery and to support disaster-stricken countries.

A number of pre-conditions were identified, with the need to meet them before concrete results can be secured. Most relate to the strengthening of public decision-making processes, from local to national. Risk reduction needs to be an integral part of national and sub-national/provincial development plans, besides linking it to existing sustainability programmes such as ISO 14001 and Local Agenda 21, and larger integrated natural resource management programmes. Comprehensive urban development strategies and proper land use planning also go a long way in ensuring that the necessary conditions are set to reduce and mitigate the risk of damage from disasters.

Quite clearly, there is a priority to develop mechanisms to bring new, and influential local stakeholders closer into the global action programmes and vice versa – for example, the business sector by creating new consultation and cooperation mechanisms. Capacities of governments (national and local), but also business groups in dealing with risk factors will need to be built, along with the strengthening of mainstream development actors to incorporate risk reduction into their decisions. Reducing the underlying risk factors is in deed a critical cross-cutting issue that runs through all stages of the disaster management cycle.

2. primary issue

The contributors to this thematic panel identified the following six primary issues. Emphasis was repeatedly given to their close interdependence. In negative terms this can be seen in their role as underlying causes of disaster and in positive terms as their integrated role in defining protection policies and actions:

2.1 Good Governance

Effective governance was seen throughout the cluster discussion as being
the foundation block of effective risk reduction. Amongst the many examples cited, two are of particular importance:

- the development and maintenance of the regulatory environment.
- securing strong partnerships between stakeholders.

The Regulatory Environment

This included work on building code development and enforcement as well as on the development of land-use planning controls. This discussion placed emphasis on the need for legislation to support the development of relevant building byelaws, as well as on the need for the incentive of realistic targets, linked to the Millennium Development Goals (MDG's).

Partnerships

Governance also embraces the need for strong partnerships to be formed between the multiple stakeholders involved in disaster risk reduction. These partnerships must move beyond token links between bodies to become effective and formalized relationships where mutual roles, mandates and obligations are defined, agreed and followed. For these partnerships to work effectively, it is essential for such relationships to become functional and productive at a practical level, with strong patterns of mutual accountability.

- *Proposed actions: Development of realistic building codes; stronger implementation of regulation through enforcement procedures; and the development of alternative mechanisms to enforced regulations for low-income groups living in non-engineered dwellings (similar to agricultural extension local experts). Provide leadership and a range of examples by Governments of safe public infrastructure within flood plains and near coastal zones; stronger public and NGO consultation in local development and the creation and maintenance of political will and commitment to work in partnership with civil society at large.*

2.2 Community Based Disaster Management (CBDM)

For effective community based disaster management, bottom-up systems of managements need to be linked with top-down frameworks in a fully integrated disaster management system. CBDM should be institutionalised through legal frameworks, job descriptions, agency mandates, and patterns of funding. These elements require the development of strong leadership training

at the local level. Disasters also need to be recognized as essentially local in nature, and therefore require strong local action at the community level.

- • *Proposed actions: develop and assist CBDM programmes in vulnerable communities, where long-term disaster preparedness procedures need to be instituted – by the creation of community disaster support groups etc. (retaining the disaster relief and response mechanisms with the local and national governments);*

2.3 Education

The educational process is essential at a number of critical levels: 1. Preparing local communities to prepare and protect themselves 2. Community based disaster management, 3. Educating public officials to manage risk reduction. 3. Protecting schools and the education of children.

- • *Proposed actions: Use schools, universities and research institutions as memory repositories of past disaster management practices; institute systems of collaboration with educational institutions to develop localized early warning systems; create educational packages to generate awareness among different segments of the society – to trigger appropriate action by appropriate actors.*

2.4 Community Health Care

Much depends on good working primary health systems that look after the immediate health needs after a disaster, as well as on the use of hospitals as a rallying point for victims of disaster. Thus, disaster risk reduction at the community level can lie under the umbrella of working primary health care systems. Health workers need to incorporate these disaster protection responsibilities into their activities. Hospital building safety and retrofitting (including a disaster management plan itself for each hospital) are also of obvious importance so that lives can be saved and protected following a disaster.

- • *Proposed actions: Strengthen the centrality of a good working primary health care system in any disaster management plan (rather than create separate systems/plans specifically for disaster protection); build and retrofit hospitals and their critical functions so that they are not disrupted during the response to a disaster; integrate small health centres and dispensaries into disaster response plans; include the use of key community health care workers such as dispensers and mid-wives (who have the confidence of the community and are knowledgeable of the community) as key communicators on disaster preparedness.*

2.5 Gender Issues

Gender issues needs to be a critical aspect of a disaster plan, particularly to enable communities to recover quickly from a disaster – since women and children, who are more dependent on their immediate vicinity, are therefore more vulnerable to disasters[1]. Many women and children often remain at home – where most of the deaths take place to due to disasters (particularly in earthquakes where over 95 percent of deaths relate to building failures). For example, the Indian Ocean Tsunami highlighted yet again the significance of gender issue in that large number of women as well as the small children in their care, suffered disproportionate losses. Gender concerns must attract a far higher political priority than present levels for significant progress to be made. In addition, gender awareness relative to disaster protection is a vital educational and governance issue.

- *Proposed actions: Political leaders to recognise the issue and ensure that a good gender balance is secured in representatives from any community; place higher political priority on the needs of women and children in disaster preparedness and response plans; incorporate their specific needs and perceptions into community level preparedness plans and programmes.*

2.6 Environmental Protection

The cyclical inter-linkages of good environmental management and disaster mitigation are well known. These apply to both natural and urban environments. Environment management *is* in itself risk reduction. The patterns are clear: deforestation decreases flooding downstream, tree planting along coasts are used as sand dune barriers, reconstruction and protection of mangroves and coral reefs has strengthened their role as natural barriers against storm surges and tsunamis. For example, the need for environmental protection has been highlighted in the severe flooding of 2004 in Haiti (as compared to, for example, Dominican Republic which suffered less from the same storm – because of controls on deforestation, community education and environmental management). This is also true of the recent Indian Ocean Tsunami. Thus the environment has to be recognized as having natural protective responses, which need to be respected and managed prudently as part of sustainable development. Secondly, the urban environment presents very serious threats to people and property in disaster prone areas. This is critically linked to rapid urbanisation and the occupation of highly unsafe sites by urban migrants. However, the urbanisation process is also a coping strategy for victims of rural disasters seeking for new livelihoods and the opportunities that urban centres provide.

- *Proposed actions: Incorporate disaster mitigation dimensions in any environmental management programme; integrate water supply, land drainage, water pollution control, flood control systems, river dyke systems, etc. under a unified catchment area*

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[1] "*Women have plans for themselves, for their children, about their home, the meals. They have a Vision. A man wants to enjoy himself.*" - Grameen Bank's MD Yunus to a US Congressional Forum on why 94% of his loans in Bangladesh go to women.

management programme/authority; early warning systems should also look for signs of environmental degradation that can result in a disaster itself, or exacerbate impacts of a disaster.

3. lessons learned, good practices, and institutionalised experience

Lessons can be rationally learned by considered reflection or they can come from negative experiences, where painful lessons are thrust upon authorities. The key to evaluation of post-disaster assessments and response is to organize a government-led multi-disciplinary/inter-sectoral collective lesson-learning exercise while the disaster is still fresh in the minds of officials and affected communities, but this requires top political leadership, commitment and creative imagination of opportunities to learn as the "art of change".   Good examples abound and can be seen in "lessons learned" exercises that the Government of Jamaica mounted immediately following Hurricane Ivan and the similar study by UNEP of the lessons they, and their local partners learned from Ivan and the Tokage typhoon in Japan. The outcomes from collective learning exercises can have a strong risk reduction focus, and these results should be used by planning teams at the local level to prepare disaster management plans. Therefore the linked chain from learning from experience to doing and applying can be fast, intense and effective. The following examples of effective learning were noted during presentations and discussions:

3.1 Learning Survival Skills
These include such basic life skills as learning to swim and how to behave during floods, tsunamis and earthquakes etc.   These need to be taught as part of every child's educational curriculum and as part of basic community awareness, however severe cultural constraints need to be addressed where they inhibit such necessities.

3.2 Learning how the Environment protects itself
The natural environment possesses protective mechanisms that can significantly reduce hazard impacts. These mechanisms need to be better identified, understood, maintained and developed as public policies to secure overall environmental protection. UNEP's Task Force for the Indian Ocean Tsunami has already, (just three weeks after the disaster) enabled affected countries to mount long-term environmental restoration programmes, related to coastal area recovery, waste management, impact assessments and the recovery of   mangroves and coral reefs, etc.

3.3 Learning to protect Medical Facilities

The failures of hospitals and health centres in repeated disasters has lead to some important initiatives by PAHO and WHO to encourage governments to make certain that their hospitals are safe in terms of their structural performance and that within the hospitals, there are effective disaster plans to enable them to function effectively during disasters.

3.4 Learning the Power of Education

The educational curriculum can naturally absorb and disseminate information concerning natural hazards and personal protection and this requires development for all ages in response to local hazard threats. In addition, education and training has become widely used at community levels to train builders in safe construction techniques, farmers to diversify cropping patterns as drought protection etc. Also in recent years there has also been a rapid expansion in the training programmes for the national officials in the practice of disaster management. This has been promoted by a variety of academic, NGO and governmental groups such as ADPC, Cranfield University, IFRCS, PAHO and OFDA. Such courses now tend to routinely embrace disaster risk reduction as well as emergency management, thus providing officials with a much more balanced appreciation of links within the disaster cycle.

3.5 Learning to expand from Relief to Risk Reduction

Agencies with a primary focus on disaster relief can expand this narrow emphasis to incorporate wider and closely linked concerns such as preparedness as well as longer-term recovery. The Red Cross provides an admirable example of how this transition has been made during the past decade, with the results that the IFRCS and National Red Cross Societies have often become front-runners within the NGO community in developing risk reduction policies and implantation.

3.6 Learning how Good Ideas evolve into Standard Practice

Similarly to the above experience of institutionalised learning, examples can be found, such as Mongolia, where there has been an enthusiastic acceptance of the notion of Community Based Disaster Management (CBDM) to the point where it can be incorporated into national policy. Thus, what was merely an idea 5 years ago has now become an institutionalised pattern, which is already expanding throughout the country as part of a national safety culture.

4. suggested indicators to measure accomplishments

- The MDG's for health were emphasised as being the natural targets for community health
- Development that can incorporate health factors that relate to disaster risk reduction.
- There was also a range of specific benchmarks suggested for building safety these included the expansion of building codes and their enforcement as well as land-use

planning controls. Some of the targets suggested related to 2010, other to 2015, to synchronize with the MDGs and as far distant as 2020.

- Indicators were urgently needed to measure the .effectiveness of disaster mitigation and preparedness to justify continued financial spending

5. partnerships

The importance in building effective operational partnerships was taken for granted as the only sensible way forward if sustained progress is to be secured in risk reduction. The following typical examples were cited by contributors:

1. UNCRD's Programme on Community Based Disaster Management (CBDM)
2. UNEP-ISDR Joint Global Programme on Environment and Disasters
3. UNEP-IETC's Programme on "Action for Environment and Disaster Mitigation (AEDM)
4. The ProVention Consortium that has forged effective links between the World Bank, IFRCS, Private Sector Bodies and Academia
5. UNEP's Awareness and Preparedness for Emergencies at the Local Level (APELL)

6. additional sources of information

a. http://www.unep.or.jp/ietc/wcdr/unep-tokage-report.doc
b. http://www.hyogo.uncrd.or.jp/activity/projects/01cbdm.htm
c. http://www.who.int/water_sanitation_health/hygiene/emergencies/en
d. http://www.seedsindia.org
e. http://www.paho.org
f. http://www.proventionconsortium.org
g. http://www.uneptie.org/

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